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ABSTRACT

These proceedings contain edited versions of the papers presented at a 1-day forum on aviation education that focused on the need for programs such as Opportunity Skyway, which introduces job possibilities in aeronautics to middle and high school students. In the foreword, Carlton Spitzer emphasizes the need for partnerships with the aviation industry and work force development community in preparing youth for employment in aviation against the background of rapid technological advances. The following papers are included: "Share Reality with Students" (Knight); "The Critical Need for Collaboration" (Puhalla); "Lifelong Learning Will Ease the Pain" (Halperin); "Manpower Needs in Aviation" (Strickler); "Summary" (White); and "The Charge" (Puhalla). The commentary "Theater as Classroom" (Olanoff) is presented along with several reactions/commentaries to the Puhalla, Halperin, and Strickler papers. Appended are the conference agenda, biographies of the conference's 22 participants, and selected participant comments regarding their reasons for participating in the conference. (MN)

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TOMORROW'S NEEDS; TODAY'S CHALLENGES

First Annual Aviation Education Forum June 18, 1993

Edited Proceedings

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TOMORROW'S NEEDS; TODAY'S CHALLENGES

First Annual Aviation Education Forum
June 18, 1993

Sponsored by

OPPORTUNITY SKYWAY, Inc.

and

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FOREWORD

Carlton E. Spitzer
Founder and President
OPPORTUNITY SKYWAY, Inc.

TODAY WE JOIN THE AVIATION INDUSTRY and the workforce development community in planning for an uncertain future. Transportation systems change as the technology advances. No one can accurately forecast the precise configuration of tomorrow's intermodel transportation systems, or the exact kinds of employment opportunities those systems will provide.

What is certain is that only educated and trained workers will be welcome in a high technology system, and that we must motivate and prepare today's youth for tomorrow's technology. All youth. Especially minority, disadvantaged and disabled youth who are woefully underrepresented in our ranks. Our efforts must be serious, cohesive and focused.

Some of the distinguished participants in this forum are in a position to initiate sweeping changes in the way we prepare today's youngsters for tomorrow's jobs. All of us should support their initiatives in the public and private sectors. And each of us, in our own circle of influence, where we live and work, can make a difference. I trust we will.

For a half century I have been witness, with many in this room, to the high intelligence and courage of pilots and all those who keep them in the air. In the past three years, since forming OPPORTUNITY SKYWAY with Joe Puhalla, I have appreciated even more fully and personally the caring and concern of pilots and aviation workers at every level throughout the industry. On May 15 this year, for example, 65 volunteer pilots - many of whom rented aircraft at their own expense - flew more than 100 students and teachers to and from our annual Aviation Careers Fly-in. Other supporters, in every field of aviation, in the air and on the ground, serve as mentors to students and partners to teachers.

In addition, members of The Partnership for Training and Employment Careers, the Private Industry Councils, and their colleagues throughout workforce development have demonstrated their partnership with aviation. I have come to know and value their work, and we are honored to co-sponsor this forum with The Partnership For Training And Employment Careers.

We have much work to do.

That one million youngsters drop out of school every year in the United States of America is everyone's tragedy, everyone's challenge. The best and the brightest can be discovered among those one million dropouts, if we reach out and include them in our plans.

Edited Keynote Address

HOW DID WE GET WHERE WE ARE? HOW SHOULD WE BUILD FOR TOMORROW?

Theodore Robinson
Aviation Historian
Tuskegee Airmen, Inc.

TOO MANY YOUNGSTERS lose their way in our society. Their misguided compass points them to trouble and unemployment, and puts our whole nation off course. Alternative educational programs, and supplemental programs, such as OPPORTUNITY SKYWAY, are therefore absolutely essential to help these youngsters stay in school, develop an interest in learning, and begin to focus on careers of choice. Our national welfare depends on the success of such programs.

OPPORTUNITY SKYWAY is focused chiefly, not exclusively, on motivating and preparing minority, disadvantaged and disabled youngsters for work and citizenship.

Why is it necessary for us to focus on these populations?

One has only to consider the current underrepresentation of minorities and women throughout aviation to answer that question.

We got where we are, ladies and gentlemen, because of neglect, indifference, discrimination, misconception. We've come a long way toward reconciling those injustices and slights, not only for those offended, but for the nation itself. But the statistics demonstrate that we have a long way to go.

Less than one percent of airline pilots flying today are African American. Perhaps two percent are women. And if it had not been for the courageous African American aviation pioneers who showed us the way after World War I, and the Civilian Pilot Training Program at the beginning of World War II that opened the doors to African Americans to receive flight training, we might not be talking about even one percent or two percent minorities and women in aviation in 1993. We owe much to those early leaders.

Despite formidable barriers and blatant discrimination, pioneers such as Bessie Coleman, August Martin, Cornelius Coffey, Chief Anderson, Marlin Greene, John Greene, and many others, demonstrated by their performance that African Americans could learn to fly as well as any other group of citizens, and that they richly deserved access to the aviation industry and the respect and admiration of their peers and neighbors.

Today's students must see that learning has a real payoff. That hitting the books today really prepares them for work tomorrow. School-to-work initiatives, apprenticeship programs, summer ground schools, internships, job shadowing, tours of aviation facilities, role-model speakers, career nights, caring mentors, and realistic, hands-on curriculum can make a world of difference.

We see the positive results of these kinds of activities at every OPPORTUNITY SKYWAY affiliate site. Kids who said they wanted to drop out of school not only stay in school but develop an interest in learning skills useful in the workplace. More than half of the youngsters who graduate from high school do not go on to college. Unless we prepare them for work, they are likely to be numbered among the million drop outs, the lost generation whose compass steers them to despair and tragedy.

We can change the pattern. We can set a true course for most of these youngsters if we will. This forum is designed to bring workforce development, education, and aviation together so that we might plan together for the future of our youth. Let us today pledge to each other the cooperation and partnership that is required to fix the compass.

SHARE REALITY WITH STUDENTS

Robert Knight
Executive Director
National Association of Private Industry Councils, Inc.

IN TERMS OF WORKFORCE DEVELOPMENT, America has been running downhill for twenty years, since the mid 1970s. Our vision is out of sync with reality. We seek a diverse, educated, mobile workforce to meet the needs of an expanding economy. What we have is a divided workforce, largely unprepared for advancing technology, trying to find a place in a shrinking economy. The gap widens daily between those who have and those who have not. The gap also widens between the technically skilled - people ready to assume responsibility in the Information Society - and the technically illiterate who still seek basic jobs in a disappearing Industrial Society.

It is clear we need new and innovative investment in workforce development, relevant to the changing workplace, and that we must have the full involvement of American industry in the process. Today's youngsters must see that learning has a real payoff. That is why we must bring school and work closer together. We need to see employers in the classroom on a regular basis, and students on the job part of the time. We need models we can replicate in urban centers and rural communities. OPPORTUNITY SKYWAY provides one such model.

First, it provides an industry-specific coalition approach that other industries can mirror. Second, its hands-on, realistic bridging of classroom to workplace deserves serious review by all employers who wish to assist educators in preparing work ready graduates - whatever job or profession the graduate has in mind.

OPPORTUNITY SKYWAY promotes enthusiasm in the classroom, among students and teachers. It trains teachers to use aviation to help teach math, science, history, geography and other subjects, thus making course work job relevant.

Students who seek to fly the airplane and students who seek to handle baggage are equally encouraged and assisted in their ambitions. There are no unimportant jobs in aviation, the program emphasizes, and all ambitions are treated with respect, dignity and helpfulness.

That is the model we need to replicate; one that emphasizes the joy and satisfaction that can be found in doing any job well, and becoming a responsible employee or entrepreneur, as well as a responsible citizen.

Moreover, industry-specific involvement assures the availability of informed, highly-motivated role-model speakers and mentors, relevant tour sites, professional materials and expert guidance in relating curriculum to the workplace.

A White Paper (edited)

THE CRITICAL NEED FOR COLLABORATION

Joseph T. Puhalla
President
The Partnership For Training
And Employment Careers, Inc.

EDUCATORS, workforce development professionals and business leaders have the responsibility of working together to create a system that ensures our youth the skills training to compete in an ever changing marketplace. The need for collaboration is apparent and compelling.

A 1983 study by the Conference Board concluded that fewer than one in ten large United States corporations hire new high school graduates. Yet half of our graduates do not go on to college and urgently need on-the-job skills training. Industry indifference gives the youth of competing nations - Germany and Japan included - a five-to-ten year head start in gaining significant occupational training, and eliminates what should be a natural line of communication between our employers and secondary schools. Student incentives to stay in school, relate learning to work, and focus on career possibilities are seriously undermined.

What price do we pay for minimum involvement of business in our high schools? Although numerous studies verify that while most of today's jobs demand post-secondary skills training, they do not require a college degree. But big companies still erroneously equate higher degrees with higher performance on the job. Skills necessary for companies to compete, and for high school graduates to be employed, are not even being identified and communicated to secondary school educators and workforce development personnel.

This communications gap is having a major impact on the fortunes of all youth, and especially our minority and disadvantaged youth. Only 57 percent of African-American youths with a high school diploma are employed in any kind of job, compared with 79 percent of white youths. Only 29 percent of African American youths who have dropped out of school are employed.

Fortunately, we are not without models to help us transition to effective school-to-work programs across the nation. Three come to mind:

* In Prince George's County, Maryland, high school seniors were trained in geographic information systems in school-to-work programs. The employer helped to develop the curriculum.

* A local hospital prepared high school students to become EEG and EMG technicians in a school-to-work program administered by a private industry council. Occupational needs were verified before training began, and employment of successful trainees was all but assured.

* OPPORTUNITY SKYWAY, Inc., which started in Prince George's County as a hands-on summer learning experiment in 1990, is now a national, industry-specific year round program because it skillfully relates employer and employee needs and aspirations, and fully engages industry executives as planners, mentors, curriculum advisers, and school-to-work advocates.

These programs work, in my view, because they are industry-specific, with industry fully involved in curriculum development and training methodologies, with course material related to job requirements, identified at the start, and measured at completion of the training. Further, job availability is determined at the start, and each school-to-work activity involves business, education and workforce development personnel. Personnel are tied to the program as members of an advisory committee, and industry representatives are engaged in the actual training. The standards of the job , the industry, and the particular company are respected and met. Youths who measure up are hired at competitive entry-level wage levels.

Success, therefore, is determined by involving the particular industry, defining measurable skills at the start, and determining the availability of jobs if students measure up.

Our challenge at this forum is to identify programs which ensure the availability of skilled, motivated workers in the aviation industry. Clearly, our model is OPPORTUNITY SKYWAY, which, in three years, has become a state-of-the-art, industry-specific program.

It has a distinguished board of directors, a helpful volunteer committee, formal partnerships with major aviation and workforce development organizations, and affiliate programs that address local needs and aspirations while maintaining national goals and standards.

It has diverse curricula, from entry-level job preparation to flight training. OPPORTUNITY SKYWAY introduces the whole range of job possibilities in aeronautics to middle school and high school students, and helps prepare them for those careers. It provides training and orientation flights for teachers and counselors, summer internships, and private pilot ground schools for students who are prepared to undertake that challenge. And it is emphasizing school-to-work initiatives at all of its affiliate sites, focusing chiefly on aviation technology.

At-risk students who enrolled in its start-up program in 1990 are now in college, military service, and the workplace. Students enrolled in its current programs enjoy innovations developed during the past three years, including an exciting Theater As Classroom workshop designed to bring history alive, especially aviation history, with a strong focus on the contributions of minorities and women.

In my opinion, this aviation model deserves the support and involvement of every aviation and workforce development organization. The Partnership for Training and Employment Careers, and the National Association of Private Industry Councils are enthusiastic and dedicated advocates of OPPORTUNITY SKYWAY. And, as you know, partnerships have been signed with many aviation organizations, including the Federal Aviation Administration, the Aircraft Owners and Pilots Association, the National Association of State Aviation Officials, the Tuskegee Airmen, Inc., the Organization of Black Airline Pilots, the Civil Air Patrol, and chapters of Negro Airmen International and the Air Force Association.

Affiliate programs are operating in middle schools and high schools in Maryland, Delaware, Pennsylvania, Georgia, Nevada and California. Additional affiliates will start up this year in Massachusetts, North Carolina, Virginia, Kansas and Louisiana.

But if we are to step up to the challenge of preparing today's youth for tomorrow's careers in aviation, much more must be done.

First, we must identify funds so that additional research and development can be accomplished to strengthen and diversify the model for replication and modification in urban centers and rural communities.

Second, even stronger ties to the aviation community must be forged. The aviation community must take a leadership role in strengthening and expanding OPPORTUNITY SKYWAY. It is essential that major air carriers as well as fixed base operators understand their stake in the success of OPPORTUNITY SKYWAY and embrace the effort nationally and regionally.

Third, workforce development officials must help industry establish training programs and measurement systems. As collaborators in common cause, we must agree on the training plans at the start, confer throughout, and concur on the measurement of job-readiness upon completion of the training.

We have an unparalleled opportunity to build on the solid base OPPORTUNITY SKYWAY has created, and we can move forward with only modest funding.

As Dr. Samuel Halperin has emphasized, this nation needs to build an effective education and training system, and avoid creation of underfunded demonstration programs.

OPPORTUNITY SKYWAY has demonstrated its effectiveness. It has established the model. Now all of us must come together - from aviation and workforce development - to take full advantage of what exists, to build on this model in the best interests of our youth, our industry and our nation.

The pioneering spirit that characterizes the aviation industry can and should lead the way. It is of the utmost urgency that we commit ourselves to the task of identifying resources to build the future. Success requires unwavering commitment and a genuine collaboration between the leaders in aviation and the leaders in workforce development.

Emphasis on "Learn To Earn" philosophies and methodologies are needed. Collaboration is requisite. Fragmentation and duplication are the barriers to be torn down.

Comment on paper delivered by Joseph T.Puhalla

LIFELONG LEARNING WILL EASE THE PAIN

Samuel Halperin, Ph.D.
Director
American Youth Policy Forum

IN CONSIDERING THE PROBLEMS OF OUR TIME, we tend to think too often about "them" and not "us." There is enough pain to go around these days. People are working harder and earning less. More poor people are getting even poorer. Our children are less likely to be better off economically than their parents, often even if they earn a college degree.

We have been exporting jobs and trying to adjust to an increasingly automated and instrumented workplace. The Information Society has overtaken the Industrial Society and, yet, we continue to train our youth for the careers of the past, not of the future.

Is a youngster really better off with a high school diploma? Statistics say yes, rather emphatically. But the concomitant reality is that even a high school diploma does not carry a youngster very far. Postsecondary skills training is absolutely necessary to survive in today's technical work environment. The real answer we must face, nay, grasp and work toward, is lifelong learning for all citizens. Our workers, just as the workers who compete with them around the world, must constantly upgrade their skills, and often learn new skills, simply to keep pace with change and remain useful employees and entrepreneurs.

For too long in this country we have viewed a college degree as a pre-requisite for success. If a man or woman did not have a four-year degree they were a nobody; second class. In short, we have been saying that 75 percent of our citizenry is second class. And in promoting that fiction, we have been downgrading the dignity and power of all kinds of useful work requiring less than a four-year diploma.

Our job, here today, and every day, individually and collectively, is to restore and revere the dignity of work. All useful work. And to concentrate, in collaboration, on training our youth realistically for tomorrow's jobs and responsibilities. The aviation and workforce development groups represented here today at the National Press Club must play key roles in that vital mission.

Joe Puhalla has said we need models for replication and modification. I agree with Joe that OPPORTUNITY SKYWAY is one of those models. Why? Because it builds on good, sound research; it is clearly part of the solution to the problems we recognize; it prepares youngsters for good jobs, and in the process, produces good people. It restores our respect for all work, at all levels. It dignifies all work. In so doing, it keeps youngsters motivated, teachers involved, and makes business a necessary and esteemed partner.

The Clinton Administration seeks to build partnerships. OPPORTUNITY SKYWAY presents a splendid partnership which unites aviation and education with workforce development. Government and business should be supporting OPPORTUNITY SKYWAY and programs like it through school-to-employment initiatives.

Dollars spent to fully develop OPPORTUNITY SKYWAY will be dollars well spent.

One of OPPORTUNITY SKYWAY's most vital features, in my view, is its emphasis on continuing adult role-modeling and mentoring relationships with youngsters. Kids tell us they really want such relationships and nurturing. The fact is they do need and welcome guidance. The evidence is they do listen and respond. OPPORTUNITY SKYWAY involves caring adults in the lives of students who may be struggling with their identify, self-esteem, self-confidence. The adults who share that struggle show that there is a brighter world out there for students who make the effort to learn. The adults do not say it is an easy road to travel, only that it is a road worth traveling, and offering rewards for those who do their best; for those who get a high school diploma and then acquire the technical and administrative skills they need through post-secondary training.

I hope that much of our future on-the-job training will begin in high school in school-to-employment programs like that modeled by OPPORTUNITY SKYWAY.

OPPORTUNITY SKYWAY has pointed the way. Our job, I believe, is to make this program succeed on a national scale.

COMMENTS

Panelists respond to paper delivered by Joseph T. Puhalla and the comments of Samuel Halperin, Ph.D.

I HAVE JUST RETURNED from visiting schools and workforce development programs on the West side of Chicago and the South and West sides of Buffalo, and it is my firm belief that the future of this nation in large measure depends on the future of youths in those kinds of neighborhoods. We must prepare today's young people for tomorrow's jobs, otherwise I assure you they will find some means of making money.

Yes, we surely need new, innovative partnerships between local schools and local employers. Yes, we need exciting and practical school-to-employment programs - perhaps made exciting because they really are practical and actually provide employment. But most of all, ladies and gentlemen, we need a fundamental change in our attitude about work and preparing people for work.

We ask the schools to be more flexible and work-oriented. And they should be. But we must also ask ourselves, no, demand of ourselves that same flexibility and open-mindedness in our places of work, and in the trade associations we manage. Revamping education and initiating school-to-work programs is not a one way street. Joe Puhalla is right: we need honest collaboration in the national interest as never before. And we have a starting point in aviation.

OPPORTUNITY SKYWAY is the most amazing volunteer effort I've ever been associated with in my 20 years in workforce development. It can move us forward.

***Lawrence Brown**, Esq., President*
WAVE, Inc., Washington, D.C.

CALIFORNIA HAS LED THE WAY in school-to-work initiatives through its Regional Occupational Programs - which have been expanding in terms of geography and diversity for more than 20 years. There is no tuition. And adults needing to change jobs or upgrade skills are included as well as youngsters in secondary school.

For many years we have been conducting our training at employer sites and in community facilities as well as in the classroom. The programs serve students age 16 and over, adults, as well as many disadvantaged and minority youth.

Teachers must have a minimum of five years of experience in the field they teach. For example, David Switzer, who taught the aviation course at Palm Springs High School last year, is a retired Navy pilot and FAA official. The ROP focus is on getting and keeping a job. In preparing curriculum for approval in Sacramento, we spend time observing workers on the job, and interviewing workers and their supervisors. When employers come to the classroom they explain the rules of the workplace to students, and those rules are followed in the classroom and on the job. This is precisely what Dave Switzer and I did in creating the aviation curriculum: we interviewed and observed almost every worker in almost every capacity at Palm Springs Airport, conferred with employers about future job openings, and prepared course material based on work standards.

The direct involvement of business is absolutely necessary. Teachers must have direct, candid, ongoing contact with employers to remain current on workplace needs and changes. We also have to validate the job market. We don't want to spend time training people for jobs that don't exist, or won't exist. So job forecasting in cooperation with industries and individual companies is important.

We were pleased to affiliate with OPPORTUNITY SKYWAY in Palm Springs, California because its program and partners make it credible and practical.

It motivates youngsters to stay in school and develop an interest in learning which they can immediately relate to the world of work.

***Jim Burruss**, Coordinator*
Regional Occupational Programs
Riverside County, California

DELIVERY SYSTEMS MUST CHANGE because the workplace is changing. Our nation is changing. For example, more than 45 percent of high school graduates on Maryland's Eastern Shore do not go to college. The economy is down. Jobs are scarce. A recent advertisement for employment in that area resulted in 4500 applicants for less than 200 jobs. So opportunities are fewer and demands are greater. Does this mean that we should be encouraging all students to seek four-year college degrees? The answer is a resounding no.

Why? Because 70 percent of jobs forecast in the year 2001 will not require a college degree. What today's youth must learn is flexibility. Technical flexibility. Computer skills. General technical competence that can be modified and applied to a changing workplace. Indeed, today's students will likely be required to change jobs, even careers, once, twice or several times.

So our whole way of thinking about school and work needs revision. Industry must be education's partner, with workforce development, in charting a new course in school-to-work programming.

OPPORTUNITY SKYWAY works so well because it provides hands-on experiences for youngsters and their teachers during the school year, and special incentive programs, such as private pilot ground school, during the summer months. Given features like its annual student-teacher aviation careers fly-in to different airports in Maryland, and its theatre as classroom project, which focuses on role-playing and workshops that bring history alive, one can understand why OPPORTUNITY SKYWAY excites and motivates students and teachers alike.

John Valenzano
Vocational and Technical Education
Maryland Department of Education
Baltimore, Maryland

HAVING INDUSTRY AS A PARTNER helps us stress quality performance and high work standards. We conduct 18 different vocational and technical programs in our region, and in each field we develop an integrated curriculum of school and work that prepares our students academically and practically for employment or advance study.

With OPPORTUNITY SKYWAY, we have started the first vocational-technical secondary school aviation program in Delaware, and it is off to a good start under the supervision of Harry Batty, Jr., a former Air Force pilot who earned his teaching certificate several years ago.

We are teaching youngsters to fly, using the facilities at Sussex County Airport, and preparing other students for non-flying careers. We expect to add on features as we expand and move forward.

Our initial year was a good one. The goal is to have the individual student fulfill his or her potential. Many of our students will go on to advance training. Some will go directly into the workforce or military services. Others, who may not have considered college initially, will be persuaded to do so.

***Dr. Jeff Adams**, Superintendent*
Kent Polytech
Woodside, Delaware

THEATER AS CLASSROOM

***In February, 1991, OPPORTUNITY SKYWAY** brought 12 of its students and two teacher-mentors from Du Val High School in Lanham, Maryland to a performance of* Black Eagles, *a play about the famed (racially segregated) Tuskegee Airmen of World War II. Their remarkable performance in escorting bombers with their fighter planes over Africa, Italy and Germany without losing one, made these African American pilots a legend in their own time.*

Presented at the Ford's Theater in Washington, D.C., the matinee performance was preceded by a morning workshop for students from all over the Washington metropolitan area. Hannah Olanoff of The Ford's Theater, and her colleagues conducted the workshop.

The event made a profound impression on the OPPORTUNITY SKYWAY students, many of whom were attending a live theater performance for the first time. OPPORTUNITY SKYWAY organizers resolved that day to incorporate drama to teach aviation history, with emphasis on the contributions of women and minorities.

OPPORTUNITY SKYWAY Theater was introduced during the luncheon at the June 18 Forum at the National Press Club in Washington, D.C.

Caleen Sinnette-Jennings wrote and performed a monologue on the life of Bessie Coleman, a renowned African American aviation pioneer. And young actors studying with Ms. Jennings also performed monologues written by her about Tuskegee Airmen, Bessie Coleman as a young girl, and a young man yearning to fly.

Doris L. Rich, author of a new book on Bessie Coleman, Queen Bess, *also spoke. The following are excerpts of statements delivered on that occasion by Ms. Jennings, Ms. Olanoff and Ms. Rich.*

Bessie dreamed about what is going on here today, that black women would be prepared for careers in aviation, and welcomed. She knew even in the 1920s that aviation would become a transportation industry. Yes, she was bad, as youngsters would say today. Brave and courageous and sometimes outrageous. A leader. A pioneer. Her spirit is here in this room today.

Doris L. Rich
Author, **Queen Bess**

OPPORTUNITY SKYWAY helped The Ford's Theater's inaugurate its Opening Acts Workshops on a cold February morning in 1991. Our objective then and now is to explore and experiment, to help students gain a greater understanding of theater and its power.

In February, 1991 the newspapers were full of stories of war and pending conflicts; of the experiences of minorities in military service, and of a play at The Ford's Theater, "Black Eagles," which had attracted President Bush and General Colin Powell to the historic theater where Lincoln was shot as he sat in his box watching a play. What better time to launch our workshops?

We filled the orchestra level with middle school and high school youngsters from the area, and our workshop focused not on the play, but on life in America in the late 1930s and early 1940s, so that students might put the play in the context of those times and increase their understanding of history, and the remarkable achievements of the Tuskegee Airmen depicted in the play.

We encouraged the students that day to become Franklin Delano Roosevelt, A. Philip Randolph, and Tuskegee Airmen. They read news clippings of that time, and correspondence. Through this role playing they learned about segregation; they walked in the shoes of their parents and grandparents; they learned about our nation's progress in race relations, and were reminded of how far the nation still has to go to achieve full equality.

Three years later, we continue to partner with OPPORTUNITY SKYWAY. We share OPPORTUNITY

SKYWAY's conviction - a conviction long held at The Ford's Theater - that drama is a powerful teaching tool. We were pleased to introduce Caleen Sinnette-Jennings to OPPORTUNITY SKYWAY, and pleased even more that she is now directing OPPORTUNITY SKYWAY Theater. One day, we trust, a performance of OPPORTUNITY SKYWAY Theater will be produced in partnership with us and presented at The Ford's Theater. Students should have such dreams to pursue. And this is one that can come true.

Hannah Olanoff
The Ford's Theater
Washington, D.C.

✝

AN OLD CHINESE PROVERB reminds us that what we read we tend to forget; what we hear we remember somewhat, but what we do we understand. The power of theatrical performance cannot be overstated, especially for the performer. Engaging youngsters in theater can bring history alive, make historical characters breathe, even transform lives of the actors.

Aviation and theater may seem unlikely companions. But we have demonstrated conclusively through workshops with students and teachers at Forestville and Du Val High Schools in Maryland that even the most reticent youngster becomes more confident and articulate when asked to step into a new world, a world of role playing and character research.

I was astounded to see and hear young students at Forestville High School perform for the first time three aviation oriented monologues I wrote. They had only minutes to read the words and imagine themselves in the roles. They performed movingly and with skills they hadn't known they possessed.

I was convinced anew that drama can be life changing; that becoming someone else, even for a little while, can challenge old beliefs, spread a student's wings, and permit him or her to rise above their limitations. That is why theater is so helpful to minority and disadvantaged youngsters. They can explore and envision themselves in new and positive ways. They can discover new values.

OPPORTUNITY SKYWAY Theater, a component of OPPORTUNITY SKYWAY, Inc., is designed to build student confidence, oral skills, and understanding of the power of the human spirit. As the Chinese proverb tells us, to do is to understand. But reading also is requisite in theater. One must study the situation, the environment, the character. One must read, comprehend and rehearse. Theater as classroom helps the individual student to understand himself or herself and to gain new perspectives on the world around them.

Caleen Sinnette-Jennings
Associate Professor, Theater Department
The American University
Washington, D.C.

Performances by Caleen Sinnette-Jennings and her young actors on June 18 received standing ovations.

OPPORTUNITY SKYWAY workshops for teachers (to help teachers use drama to teach) and students continue throughout the school year.

A White Paper

MANPOWER NEEDS IN AVIATION

Dr. Mervin K. Strickler, Jr.
Aviation Education Consultant

OUR KEYNOTE SPEAKER, Ted Robinson, gave us a good history lesson. It is important to understand our past so that we might create a better tomorrow. Permit me to add on to Ted's lesson, and then suggest some ways we might do better. This Forum provides a fine start.

The first significant aviation manpower study in the United States was done after World War I, in the mid-twenties when the Army expressed new interest in military aviation. Aviation was then part of the Army Signal Corps. The study determined there were only about 200 experienced pilots, 25 percent of whom had two or more years of college education. Well, the Army needed exactly 25 pilots, so it recruited the 25 with college training who, indeed, proved to be successful military aviators.

So it was that the Army, from that time forward, required all flight candidates to have a minimum of two years of college. Did the criteria make sense?' No. It simply and conveniently matched a number the Army had in mind, which became a requirement. This is not to say, of course, that we should not encourage pilots to achieve a higher education, but only to say that the original criteria was created by chance, not objectively, and later was accepted as if it had been determined through objective analysis. The rationale was a myth. That's history.

The Daniel and Florence Guggenheim Fund also emerged in the mid-twenties, the largest single promoter of aviation education, referred to in those days as aeronautics. The Fund's objective was to improve public understanding and appreciation of the importance of aviation.

The Fund provided support for colleges and universities to establish aviation programs; encouraged safety procedures; funded aeronautical teacher workshops; encouraged aircraft model building in the schools; published guides for aeronautical education, elementary through secondary school; promoted the development of commercial aircraft; and encouraged the use of aircraft by business, industry and other groups in society.

Indeed, much of the progress in civil aviation in the United States in the 1920s and 1930s was generated by the remarkable vision and philanthropic support of the Guggenheim families.

Without minimizing the vast contributions of barn storming pilots and pioneering aviators and inventors of the 1920s and 1930s, permit me to jump forward in history to 1939 and the advent of the Civilian Pilot Training Program, the largest pilot training program ever carried out in the United States. Inaugurated by President Franklin Delano Roosevelt on December 17, 1938, the program continued through 1944.

It compiled a monumental record. Starting in 1939 in just 13 colleges with 330 students who received ground school courses with college credit and minimum flight training, the CPTP by 1944 was operating in 1132 colleges and universities and training 435,165 candidates, including modest numbers of women and African-Americans. And 1,460 private aviation contractors provided the flight training.

You've all heard of the 99th Pursuit Squadron, the segregated squadron of Tuskegee-trained airmen attached to the 33rd Fighter Group which established such a remarkable record in combat as part of the 12th Air Force in Africa and Italy in World War II. The CPTP got most of these African-American heroes started in aviation. Before that time, it was difficult indeed for any African-American, no matter how highly motivated or prepared, to obtain civilian flight training. Tuskegee in Alabama was the principal training base, although other historic black colleges participated in the CPTP program, including Howard, Delaware state, Hampton, North Carolina Ag-Tech, and West Virginia State.

Women who successfully completed the flight training, most of whom enrolled at Lake Erie College, Adelphi, Nills College and Florida State, were not permitted to enter the military. These women, and others who had learned to fly on their own, served as instructors and as ferry pilots, delivering combat aircraft all over the United States. They also towed targets for gunnery practice, and flew courier missions. These talented and courageous women paved the way for women to serve as airline pilots later on.

There was another significant and often overlooked aviation program that came out of World War II: pre-flight aeronautics courses for high school

credit offered in more than 16,000 secondary schools between 1941 and 1945. By sad comparison, in 1970, less than 7 percent of our high schools offered any kind of aviation program. The decline reflects, I believe, a lack of awareness among policy-makers of the role aviation education can play in facilitating learning.

What evidence exists to support the premise that the study of aviation can contribute to learning?

The landmark study, Learning Through Aviation, reports on a program conducted during the 1967 - 1968 school year in Roosevelt Junior High School in Richmond, California. Basically, the study reports on an experiment which used a light, single-engine airplane to generate instructional and behavioral changes among students in an inner-city, disadvantaged area. Twenty-five 13-year-old boys, their parents or family members; four teachers, two flying instructors, and a college student-tutor made up the experimental group, which was matched with a control group of similar students in the same area.

Would the program increase student motivation, attendance, self-esteem, academic performance, and improve students' perceptions of family members and teachers?

The results of the Richmond study, the only one of its kind ever undertaken, were startling, validating the usefulness of aviation to motivate and teach. The experiment changed the behavior, indeed the lives of all the students who participated. The Richmond study provided a springboard for planning other successful programs using aviation - and later, aerospace - to stimulate, encourage, and direct young people toward citizenship and useful careers.

Among those programs can be counted the August Martin High School on Long Island; the Randall Aerospace and Marine Science Program in the Nation's Capital; Embry-Riddle University's Upward Bound program in Daytona Beach; and Sky Challenge for Teens, a program for youngsters with psychiatric problems in Washington, D.C.

A few words about Sky Challenge. Sponsored by the Aviation Education Division of the Federal Aviation Administration in 1979, in cooperation with the Psychiatric Institute Foundation, and directed by Dr. Joseph R. Novello of the Center For the Study of Human Factors, Psychiatric Institute Foundation, the program studied the effects of a specially designed flight training program on the behavior and school performance of teenagers who were hospitalized with psychiatric problems.

It was the first study of its kind working with patients 14 to 17 years of age, which incorporated ground school studies and dual flight instruction. George Banks, a well-known African-American teacher and flight instructor, served as one of the course instructors. He reported similar results among students as those achieved in the Richmond study: increased self-esteem, self-confidence, trust, resistance to peer pressure, independent thinking, self-control, mastery of personal fears, communication, parental dialogue and mutual pride.

Wrote Dr. Novello: "Like the mythical Jonathan Livingstone Seagull, Sky Challenge students can say:

There's a reason for life!
We can lift ourselves out
of ignorance.
We can find ourselves as
creatures of excellence
and intelligence and skill.
We can be free.
We can fly.

Clearly, the OPPORTUNITY SKYWAY programs achieve similar behavior changes as these historic programs I have outlined.

How can this evidence be applied to the purposes of this Forum - charting employment needs and training methods?

Let me tell you about Myths, Realities, and Practicalities.

In the past 30 years there have been four major aviation manpower studies. In 1964 the FAA, in cooperation with industry, conducted a nation-wide study of aviation manpower needs, known as Project Long Look. In 1970 the United States Department of Labor conducted a study of the needs for pilots and mechanics in civil aviation, using the period 1967-1977 as its base.

In 1981 the General Aviation Manufacturer's Association did an aviation manpower study, focused especially on the needs of general aviation. It was titled: An Operating and Strategic Manpower Analysis and Plan for the General Aviation Industry.

In March of 1992 Congress requested the establishment of a Blue Ribbon Panel to study the needs for pilots and aviation maintenance technicians for the next 20 years. The final report will be published later this year.

All of these studies have a common element: when they were started there was a perception that there was or would be a shortage of aviation personnel. And, in each instance, either during the study or shortly thereafter, it appeared that the original perceptions were either erroneous or that circumstances had changed. In brief, change was so swift and unpredictable that researchers often found themselves

saying, what shortage? There were other similarities as well, one might say constant themes which support and reinforced long-held beliefs and understandings:

There is a need for:

- aviation education programs, projects, activities, teaching materials,
- cooperation among organizations to advance aviation studies in elementary, middle and high schools, and higher education;
- more and better information for students, teachers, parents and workforce personnel on training and preparing youths for jobs in aviation, and the role aviation technicians play in the industry;
- increased awareness of the need to encourage diversity and pluralism in the industry, to give access to and prepare more women and minorities to enter the industry at every level.

I think most of us would agree. But what is the realistic outlook for young people in 1993 who wish to prepare for a career in aviation, aerospace and transportation?

First, today's youth must face the fact they will likely change careers or specialties seven times before they retire. Second, today's youth must prepare for careers in intermodal transportation, not aviation. We are moving toward integrated transportation systems in this country and throughout the world in which all modes of transport will be coordinated and integrated for efficiency and economy. Therefore, tomorrow's transportation expert must know ground, rail, sea and air transportation, and how they fit together.

Can aviation graduates get jobs? Transportation accounts for 20 percent of our nation's total economy. Within transportation, aviation and aerospace represent a very large part of this total. Jane or John Doe graduating today from an aerospace magnet school as an airframe and powerplant technician will have a rough go. General aviation is down. Jobs are scarce. Air carriers are laying off, not hiring. But they may well find jobs in related industries, such as auto mechanics, while they search, and while the aviation industry climbs out of its current slump.

They can keep up with changes in regulations by reading FAA materials. And they can keep their skills sharp by using tools and equipment properly, accepting responsibility for making repairs, and experimenting with composite materials. When jobs open in aviation, employers will appreciate the skills these graduates have acquired and honed.

Employers are also and rightfully interested in employees who have confidence and assume responsibility. They want accountable employees.

A student who has passed an FAA physical examination and a written and practical examination in order to fly an expensive aircraft solo has already demonstrated several attributes important to employers: intelligence, confidence, self-discipline, ability to follow instructions, and to think on one's own. The wait will be short and the outlook is much brighter than the current employment situation.

Huge numbers of trained people are required to keep an airplane flying and customers well served. Aviation educators should be working with school counselors on a regular basis to emphasize the diversity of jobs within aviation. There are hundreds of fine carers to pursue in aviation other than piloting, air traffic controlling, and maintaining the aircraft and its avionics. People are needed to manage airports and keep them secure; to manage and operate ground services; to schedule pilots and dispatch flights, to service aircraft and maintain secure attractive and secure airports.

Unless today's students prepare themselves now for tomorrow's opportunities in aviation, they won't be ready when the industry is. The future looks bright for students willing to stay in school, learn skills, and plan their future.

As for pilots, opportunities exist, and will expand among air carriers, businesses, air taxi services, agricultural services, flight instructing, pipeline patrolling, wildlife and forestry management, and photographic mapping and other specialties. In 1990, there were 134,856 professional pilots in these and related occupations. By 2003 analysts project a need for 40,000 additional pilots,based on industry trends and retirements.

As for maintenance technicians, it is predicted there will be a need for 100,000 to 120,000 technicians by the year 2000, reflecting the need to maintain older aircraft and accommodate new aircraft. A shortage in technicians unless the industry, in cooperation with education and workforce development, trains 65,000 to 85,000 new aviation technicians in the immediate future.

Joe Puhalla said it: today's youth, and today's educators, must concentrate on learn to earn philosophies and methodologies.

There will be a bright future in aviation for those who prepare themselves now for the jobs of tomorrow.

COMMENTARY
on Dr. Strickler's Paper

THE FAA IS TOTALLY DEDICATED to having the aviation industry, education, and the workforce development community in this nation working together in the long-term interests of our youth, our transportation systems, and our country. We must have a vision for our industry and for aviation education, capture that vision within the framework of a practical plan, and communicate that vision to the citizenry with skill and unwavering dedication.

This forum gives us a springboard. The National Coalition for Aviation Education, and all of its distinguished member organizations, and The Partnership for Training & Employment Careers, working together, provide the mechanism for bringing about a grand alliance among the decision-makers and policy-makers in our industry, in government, in education, and in workforce development to ensure a competent, well-trained, diversified, pluralistic workforce to meet tomorrow's needs.

Here today, we make a new beginning together. I have no doubt that a year hence we will be able to measure real progress. The FAA is committed to the purposes of this Forum.

Phillip S. Woodruff
Director, Aviation Education
Federal Aviation Administration
U.S. Department of Transportation

THERE ARE MANY WONDROUS ROADBLOCKS in this city. One might say a willful myopia prevails. We become trapped within our own false paradigm. It is high time we created a new paradigm to welcome and adapt to change, and thwart those who resist it with the tired old defense: "That's the way we've always done it."

Merve Strickler has mentioned the Congressional Blue Ribbon panel on which I serve. It didn't develop overnight. It dates back to 1985; eight years of planning and talking. Congress said in 1985, "Hey,we've got a problem. If we don't act, we're going to have a shortage of pilots. Tell us what we should do about it." Well, it was true we were training fewer military pilots, and many of those that had been trained were departing the military and taking corporate jobs.

So those of us who view pilots as a national resource accepted our duties as members of the Commission, but the talking had run on and we didn't take up our responsibilities until 1992. By then things had changed. My first comment to Admiral Busey and Senator McCain in presenting a preliminary report was to ask a question, "What shortage?"

The air carriers are down and consolidating. Business travel is being reduced as the economy continues to stumble. But, we quickly added to our question, "What shortage?", just wait a few years! The turn of the century will bring enormous problems to the industry and nation if we fail to train today's youth for the jobs that will be available then. Our challenge is to stimulate a vision of what will be, and to convince the citizenry that our economic struggle will pass, and career opportunities will await those who prepare and have faith in America's future.

We must continue to be aggressive in recruiting women and minorities into our ranks at every level, in every occupational capacity. Not everyone wants to be a pilot or technician, and we must emphasize hundreds of other exciting career possibilities in aviation. We must focus on teaching our students how to learn, how to study. If we instill in our young people a desire to learn, a love of learning, they will find their way in an uncertain marketplace, and discover their own aptitudes and interests.

Our task, in our wonderful flying industry, is to inspire people and motivate people and give them confidence in tomorrow. The kinds of hands-on, experiential programs for youth we extol today are exactly the right medicine. We must give youngsters a realistic view of the workplace, of their career possibilities, and then stay with our youngsters through hands-on activities and mentoring to get them through high school and on to advanced technical training and four year colleges.

There are no unimportant jobs in aviation. Every job must be done well. Every job has dignity and meaning. I am delighted that the industry is joining forces with education and workforce development on a continuing basis to make sure we do this important job right.

***Lawrence Burian**, President*
National Air Transportation Association

THIS FORUM relates to the work of the National Coalition for Aviation Education. It deals with realities and practicalities. It defines what associations and groups might be doing independently, and what they might do better collectively. It also deals with perception and substance. The worst thing in the world we could do is to build hopes and dreams for our young people and then let them down, not be able to follow through. The task here today, and for all of us in the days ahead, is to build year-long mechanisms that not only excite kids about careers in aviation, but sustain that excitement through practical instruction and realistic links with every facet of our industry.

The Aircraft Electronics Association brings 100 kids at a time out to an airport for a day. It is a whale of a day. They go flying, tour aircraft, talk with pilots and airport managers, and learn a great deal.

But we don't have a follow-through mechanism to sustain the excitement we generate in that one wonderful day. OPPORTUNITY SKYWAY provides the continuing program all of us need in the schools, throughout the school year and summer, to build on our youth activities, and the youth activities of many other aviation associations, such as the Young Eagles first flight program sponsored by the Experimental Aircraft Association; the start-up program fostered by Wright Flight; the established summer programs of the Civil Air Patrol, Tuskegee Airmen, and others.

OPPORTUNITY SKYWAY programs carry the ball every day, 12 months a year, and cover every kind of job in aviation, from piloting the plane to cleaning it. As Larry Burian emphasized, there are no unimportant jobs in our industry. And whatever job may appeal to an individual youngster, he or she deserves help and encouragement to obtain the necessary training and find their place in our industry, and in society itself.

Our job is to build a skilled workforce across the spectrum of job possibilities in aviation, and especially to identify careers on the upcurve so we can train our youth well for the jobs of tomorrow.

I see a leadership role in this process for the National Coalition for Aviation Education, working with The Partnership for Training & Employment Careers. And I have great confidence that, together, we can and will make a significant contribution.

Tyson Whiteside
Chair, National Coalition for Aviation Education
Counsel, Aircraft Electronics Association

WE MUST EDUCATE THE PUBLIC and inform teachers and students. By public I mean the news media and large constituent groups. By education I mean teachers at all levels, from elementary through college. The methodologies, I think, are pretty much in place within aviation associations, and, collectively, through the National Coalition for Aviation Education.

The guide produced for teachers by the Coalition has been well received. It is clear from teacher response at seminars and conferences, and through the mail, that they are hungry for materials which can enliven their classrooms and motivate their students.

Through the dissemination of such materials, the industry can convey to teachers, students and parents a more realistic view of the social and economic benefits our industry provides to the nation, and to the lives of all citizens. Knowledge shared generates appreciation. And appreciation translates into more informed citizens when debates arise between airport and community.

I, too, am a believer in hands-on experiential programs for youngsters and teachers. There is nothing like a tour of an airport, discussion with enthusiastic and informed aviation officials, and a flight in a small aircraft with a skilled pilot to stimulate interest and provide a lasting experience. An experience to build on. An experience that can literally change the lives of students and alter the instructional methods of our teachers.

AOPA's fly a teacher and fly a reporter programs prove the point. Our work with OPPORTUNITY SKYWAY verifies results.

We have a big story to tell: a $42 billion contribution to our economy. And we want both the industry and the nation to grow and prosper. One can't prosper without the help of the other. Nor can we bring about a truly great aviation education program without enlisting our natural partners, as we are today at this Forum. The goal is to work together over the long haul. I agree with my colleagues: it is right and necessary that we excite the interest of our young people, but, as Tyson has said, it is also our obligation to provide a continuing means of support and involvement. OPPORTUNITY SKYWAY is one program that assures year-round activity, and I am pleased to serve as a member of its board of directors.

Janette M. Prince
Secretary, National Coalition for Aviation Education
Public Affairs, Aircraft Owners and Pilots Association

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BACK IN 1960 aspiring pilots were told by the airlines that there were no opportunities and none were expected. A few years later some of the big carriers were aggressively recruiting first officers with minimum hours. Such is the roller coaster industry we live in. And so much for accurate forecasting.

My advice for young people today who aspire to enter aviation in any capacity is to train now and be prepared for tomorrow. If aviation is what you want, go for it. There will be good jobs in the near future for those who are trained and ready.

I think all of us should be a lot more concerned about the economy of our nation and the world than specific jobs that may or may not be identifiable in the future configuration of transportation. Nations rise and fall on the stability of their economy. And economies depend in great measure on a well-education citizenry. The best educated win. Win jobs. Win competitively. Win internationally. Education is the key.

The world is changing based on our declining economy. Once was that our exports of aircraft and aircraft parts made a major difference in maintaining a healthy balance of trade. No more. When jobs go abroad, and manufacturing goes abroad, so do our dollars. We have some big adjustments to make.

In this mix of concerns is the reality that minorities do not hold top-level, policy-making jobs in aviation. That is why, in 1993, less than one percent of airline pilots are African American. I doubt that statistic will change in any substantial way until and unless African Americans rise to top management posts in greater number.

United Parcel Service does have several African Americans in management positions. More than five percent of UPS pilots are African American. Perhaps the stats will improve across the board when the air transportation industry begins to climb out of its discouraging spiral. I'd surely like to see that happen. But my observation is that it won't occur even given a strong upturn without a conscious policy decision to do so. And as I said, I doubt that such policy decisions will be made without African American influence at the board table.

So I would like to see two things happen: more African Americans promoted upstairs, and more African Americans hired in the cockpit and in every other field of aviation.

This forum is asking the right questions. I hope the movement it seeks to create can find the right answers. I of course support and endorse all of the hands-on assistance we can provide to minority, disadvantaged and disabled youngsters. That is the obligation of those of us who are earning our way in this industry.

Warren H. Wheeler
President, WRA, Inc.
Chair, Virginia Aviation Board
Captain, USAir

I AM A MECHANIC BY TRADE. As a union representative, I believe my job is to help management do the right thing. And one of the important things is the achievement of diversity in the workplace and fairness to all employees, at every level, in decision-making.

As I listened to the various presentations today, I recalled the apprenticeships that flourished in aviation up to the 1960s. They were good and useful programs. People learned a skill and had a decent job. But apprenticeships simply disappeared.

The school-to-work initiatives discussed today may bring them back, or introduce a new version of the old hands-on way of training and learning. I know that the IAM/AW , working with Northwest Airlines assists employees with prior technical experience to become certified as aviation technicians. The IAM/AW operates a training program that helps United Airlines employees in San Francisco obtain certification.

What is needed, of course, is reasonably adequate job forecasting in the industry so we can prepare today's kids of jobs that will actually exist. And an outreach program--a genuine color-blind outreach program--that includes all members of society on equal footing. I am all for raising standards of excellence on the job to make flying safer and more dependable. But I am totally against any facade in that regard which is simply a barrier to minorities and disadvantaged citizens, making it difficult if not impossible to gain access to training and jobs.

When I say the outreach should extend to all citizens, that's exactly what I mean. There is a blind mechanic on the bench at United Airlines. He does a very good job. Sure, they modified the workplace a bit to accommodate him. No one complained about that. The man asks for no special favor. He just wants to do a good job. Disabled people can perform many functions in aviation. We have got to make a conscious effort to recruit people with disabilities who want to work and can perform as well as anyone else. Standards are standards. They don't change. We simply modify the work area.

Skills learned as an airframe and powerplant technician are transferrable and enable those who have

been trained in aircraft related skills to be employed in many fields. In fact, in my experience, they are sought after.

The biggest barrier to getting a job, especially for inner city kids, is language. English. The ability to articulate. Two candidates come in with more or less equal experience. One spouts street talk and wears a cap. The other one speaks English. Guess who gets the job? So it isn't enough to be a damn good technician. Somewhere along the line, in school, hopefully; at home, perhaps, the youngster has got to learn to speak and dress appropriately. That should be a requisite part of a kid's basic education in high school.

I am associated with OPPORTUNITY SKYWAY because its mission reflects my whole life experience. I was a poor student. Didn't like school. My family sacrificed to send me to technical school. It changed my life. Aviation did that. I still love it. I see the kids in OPPORTUNITY SKYWAY getting a fresh start and a new life. I know exactly how they feel.

John Goglia
Treasurer, National Coalition for Aviation Education
IAM/USAir Representative

UNTIL JANUARY I had not been in a high school classroom in 52 years. Jim Burruss and I had worked for five months or so to get employer agreements signed at Palm Springs Airport and an entry-level job aviation curriculum approved in Sacramento.

We applied the rules of the workplace in the classroom. Employers came in at the start to talk about the school-to-work procedures and the kinds of behavior, dress code and language that would be expected, and the kind that would not be tolerated. We didn't tolerate the latter in the classroom either. If a youngster would not or could not measure up, he or she got a warning. Unheeded warnings were cause for dismissal. And we did eliminate half of the youngsters who started with us.

The 16 who finished and got their certificates in entry-level aviation jobs learned a lot about themselves and life at an airport. Some actually did job shadowing in the control tower. Others learned about ground services. Some worked in food preparation. Some handled baggage. We followed the OPPORTUNITY SKYWAY rule: all jobs in aviation are important and must be performed with care. Many of the youngsters discovered strengths they didn't know they had, and learned that self-discipline is vitally important in getting and keeping a job.

I learned a lot too. I have a healthy respect for teachers and counselors. And a new admiration for all those companies who worked with us to give those kids a marvelous hands-on learning experience. Our goal is to replicate this successful program in other Regional Occupational Programs in Riverside County, and eventually throughout California.

David Switzer
Regional Vice President, OPPORTUNITY SKYWAY, Inc.
Retired International FAA Official
Retired Navy Commander and Air Transport Pilot

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SUMMARY

Arthur H. White
Chair, WSY Consulting Group, Inc.
Chair, Jobs for the Future, Inc.

YOU UNDERSTAND YOUR PROBLEMS and can articulate your goals. Believe me, you are ahead of the pack. You have another advantage. A big one. You are in an exciting industry. You can plan exciting projects for youngsters. They actually handle the controls of airplanes. Talk to pilots. Tour air and space facilities. Watch air controllers at work. Make and fly model airplanes. Participate in theater workshops to improve their language skills and learn about history through role-playing.

Sure other industries can and do provide hands-on experiential opportunities for youngsters. But the printing industry or the insurance industry--and they are wonderful people to be sure--simply can't compete with the natural excitement you can generate in an hour or a day or, as in the case of OPPORTUNITY SKYWAY, throughout the year. It's just no contest.

So you have a lot going for you. You understand all about lifelong learning and the need to relate the classroom to the workplace. This Forum verifies your determination to bring aviation and workforce development together to plan jobs and job training methodologies. I admire all that. And applaud your effort. Still, I have a troubling concern that you may not succeed unless you develop adequate resources. You need to present a clear vision and keep your promises to youngsters, as many of you have stressed.

What is needed is a kindergarten through high school development on a national scale, with strong ties to community colleges, technical training services, and four-year universities. The earlier a youngster is exposed to the ideas and excitement the greater the chances that he or she will stay in school, actually enjoy school and learning, and begin to sort out career options with the help of caring mentors and counselors.

The Clinton Administration is serious about stimulating school-to-employment initiatives. Employers will be encouraged to be part of the educational system. They will be encouraged to participate directly in school-to-work apprenticeship-type activities, and help curriculum directors relate course materials to actual job requirements. The learn to earn philosophy identified by Joe Puhalla and Merv Strickler is of paramount importance.

Multiple benefits are involved here. For the students, obviously. Minority, disadvantaged and disabled youngsters, especially, will get the extra boost they need and deserve to prepare for careers.

Employers will draw closer to the schools and have direct, personal involvement in the way students are trained for the world of work.

The confidence building that is a vital part of this process will surely encourage many students to go beyond technical training and seek four-year degrees. But all work will be honored and praised. The second class status often given non-college citizens will disappear as all professions are recognized and dignified. Divisions in our society must be narrowed. Today, for mostly economic reasons, they are being widened.

You have a marvelous program to build on, OPPORTUNITY SKYWAY. It embodies all of the principles and strengths that Joe Puhalla, Sam Halperin, Merv Strickler and others identified today as being requisite to the success of your undertaking. That you should develop a working Task Force of members of the Coalition and the Partnership is a given. I suggest you form that Task Force without delay and develop an on-going plan to engage the aviation community and the workforce development community across this country in a long-term effort.

The challenge is to get top-down endorsement and adequate funds to do the job that must be done. I congratulate you for your dedication and obvious enthusiasm. I hope your love of what you do is catching throughout all of American industry. You are on course. But you've got to add a lot of thrust. You've got to make a major, serious commitment of effort and resources. Good luck.

THE CHARGE

Joseph T. Puhalla

WE MUST ACT ON OUR SHARED CONVICTIONS with a sense of urgency. We must form the Task Force of members of the Coalition and The Partnership immediately. All of us must identify resources. And the most important help in getting resources is to have a realistic plan of action, endorsed by the Task Force and supported enthusiastically by the decision-makers in our respective aviation and workforce development organizations across the country.

All of us are grateful for the leadership that has created OPPORTUNITY SKYWAY and brought about formation of the National Coalition for Aviation Education. A wonderful start has been made. But it is just that, a start. As Arthur said, we are fortunate to have a solid program to build on and a Coalition in aviation and a Partnership in workforce development in place to work together. But it is up to us to make it happen. Having the program and the mechanisms alone will not get us there.

Today, now, before we leave this Main Lounge of the National Press Club, let each of us make a personal, serious commitment to find the resources, and through the Task Force, develop a plan of action that will move us successfully into the 21st century. Successfully in terms of training today's youth for tomorrow's workplace. Successfully in terms of helping a generation of youngsters find their way, develop their abilities, enjoy careers of their choice, and help build a strong national economy for generations to come.

Change today is driven by economic concerns and considerations. Good. That makes our case easier to sell and easier to move forward. One can and should be pragmatic as well as idealistic in promoting aviation education.

We must work together. Every day. We must make a commitment. I invite you to sign the log at the back of the room if you'd like to serve on the Task Force or make other contributions to this effort. We need to have every one of you involved. We must commit ourselves to get this job done for our youth, the aviation industry, and, in a real sense, the welfare of our nation.

Thank you for your participation today - and tomorrow.

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AGENDA

First Annual Aviation Education Forum

TOMORROW'S NEEDS; TODAY'S CHALLENGES

Sponsored by
OPPORTUNITY SKYWAY, Inc.
and
The Partnership For Training
And Employment Careers, Inc.

June 18, 1993

By Invitation

Main Lounge
The National Press Club
Washington, D.C.

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9 a.m. Welcome
Carlton E. Spitzer, President
OPPORTUNITY SKYWAY, Inc.

Introduction of Keynote Speaker
Antoinette Amos, Outreach Director
National Air & Space Museum

Keynote Speaker
Theodore Robinson, Aviation Historian
Tuskegee Airmen, Inc.

9:30 Comment on Workforce Development
Robert Knight, Executive Director
National Association of Private Industry Councils

Introduction of Speaker
Robert Knight

New Directions In Workforce Development
Joseph T. Puhalla, President
The Partnership For Training
& Employment Careers, Inc.

Reactor
Samuel Halperin, Ph.D.,Director
American Youth Policy Forum

Panel

Moderator
Cynthia Davis, Ph.D., Executive Director
The Partnership For Training
& Employment Careers

Panelists
Lawrence Brown, Esq., President
WAVE, Inc.

Jim Burruss, Coordinator
Regional Occupational Programs
Riverside, California

John Valenzano
Vocational and Technical Education
Maryland Department of Education

Dr. Jeff Adams, Superintendent
Kent Polytech, Woodside, Delaware

12:15 Luncheon *(First Amendment Lounge)*

Theater As Classroom

Remarks
Hannah Olanoff, The Ford's Theater

Remarks and Performance
Caleen Sinnette-Jennings
Associate Professor, Theater Department
The American University

Peformances
Robeson Jennings
Jerome Murdock
Needra Graham

Remarks
Doris L. Rich, Author, *Queen Bess*

2 p.m. Introduction of Speaker *(Main Lounge)*
Shelly Snyder, Vice President
National Coalition for Aviation Education

Manpower Needs In Aviation
Mervin K. Strickler, Ed.D.
Aviation Consultant

Reactors
Lawrence Burian, President
National Air Transportation Association

Phillip S. Woodruff, Director
Aviation Education Federal Aviation Admin.

Panel

Moderator
David Switzer, Vice President
OPPORTUNITY SKYWAY

Panelists
Janette M. Prince, Public Affairs
Aircraft Owners and Pilots Association

John Goglia, IAM/USAir

Tyson Whiteside, Counsel
Aircraft Electronics Association

Warren H. Wheeler, President
WRA Service, Inc.; Captain, USAir

4:30 Summation
Arthur H. White, Chair
Jobs For The Future

Charge
Joseph T. Puhalla

5 p.m. Adjourn

BIOGRAPHIES

CARLTON E. SPITZER, founder and president of OPPORTUNITY SKYWAY, Inc., has been developing public-private alliances for 20 years. He was corporate vice president, Borden, Inc. in the 1970s, and Director, Office of Public Information in the former U.S. Department of Health, Education, and Welfare in the 1960s. He is an active private pilot.

MARIE ANTOINETTE AMOS is the Multicultural Outreach Officer for the Smithsonian Institution, National Air and Space Museum, with responsibilities for increasing minority participation in the museum's programs, exhibitions, and films. She also serves as the Museum's Equal Opportunity Officer and Ombudsman.

THEODORE ROBINSON fell in love with flying when America was strictly segregated and African Americans had limited opportunity to obtain instruction. World War II found Ted in the Army Air Corps, a Tuskegee-trained pilot. Returning home, he joined the FAA and served in many capacities, including flight safety. For two years prior to his retirement from the government, he was on sabbatical at the National Air and Space Museum, doing research on the contributions of African Americans to the development of aviation in the United States and around the world. He is currently writing and editing books on the lives of African American aviators. Ted is an active pilot and flight instructor who flies his sleek Mooney out of College Park Airport near Washington, D.C. He is a charter member of OPPORTUNITY SKYWAY's Board of Directors.

ROBERT KNIGHT has been president of the National Association of Private Industry Councils since 1981. The association works to strengthen private sector, volunteer support for job training programs, and is focused principally on helping disadvantaged, "at-risk" youth and dislocated older workers. Previously, Mr. Knight was a staff member with the U.S. Senate Subcommittee on Employment, Poverty and Migratory Labor, responsible for legislation which created the Comprehensive Employment and Training Act, and which established Private Industry Councils on a demonstration basis. He began his career in employment training as a grant administrator in Wisconsin.

JOSEPH T. PUHALLA is President of the Partnership for Training and Employment Careers, Inc., a 2000-member national organization of workforce development executives; President, Prince George's Private Industry Council, and Chairman of the Board, OPPORTUNITY SKYWAY, Inc. An educator and counselor, Puhalla is known throughout the workforce development community for his innovative approaches to job training, school-to-work transitions, and drop-out prevention.

SAMUEL HALPERIN, Ph.D., has been a policy-maker in academia, the federal government, and non-profit organizations since earning his doctorate in Political Science from Washington University in St. Louis in 1956. He has worked on Congressional Committees, served as Deputy Assistant Secretary for Education, helped to design major educational legislation - elementary through higher education - and headed leadership training programs, including The Institute For Educational Leadership, of which he was the first president. He is co-author of seven books and nearly 100 articles on political process and educational policy, and has taught at American, Duke, and Columbia Universities. He was study Director of Youth and America's Future and developed two major reports, The Forgotten Half: Non-College Youth In America; and Pathways to Success for America's Youth and Young Families, both published in 1988.

JIM BURRUSS has been responsible for planning and developing Regional Occupational Programs in diverse fields in Riverside, California for 18 years, including a new program in aviation. A former vocational school instructor, Burruss is currently president of the Coachella Valley Industry Council. He believes continuity and consistency are the keys to success in and out of the classroom.

JOHN VALENZANO serves as a Regional Coordinator for the Division of Career Technology and Adult Learning with the Maryland State Department of Education. He began his career as a teacher in 1969 for the Queen Anne's County Board of Education. In 1974, he became a teacher for the Allegany County Board of Education. In 1987, he began his employment with the Maryland State Department of Education as the Principal of the school at Eastern Correctional Institution. In his current postion as a regional coordinator, he provides technical assistance to school systems in areas related to career technology education.

JEFF ADAMS, Ed.D., has been superintendent of the Polytech School District in Delaware for more than five years. Previously he was associated with Delaware

Technical & Community College for 15 years, and Wesley College for two years. Dr. Adams earned his B.A. and M.A. degrees from Appalachian State University, and his doctorate from Temple University. In 1992 he authorized a start-up aviation curriculum at Polytech, utilizing the OPPORTUNITY SKYWAY program.

CYNTHIA A. DAVIS, Ph.D., has been Executive Director of The Partnership For Training And Employment Careers, Inc. and its sister organization, the National Job Training Partnership, since 1989. Previously she served as a membership director for the American Association of University Women, and issues management director for the National Federation of Business and Professional Women. Dr. Davis was a college professor of English at George Mason University, Union College, the University of Wisconsin, and Texas A&I. She earned her B.A. from the University of Texas, and her M.A. and Ph.D. from the University of Wisconsin.

CALEEN SINNETTE-JENNINGS is Assistant Professor of Theater at The American University where she teaches acting, playwrighting and academic courses in theater. She directs The African American Actors Ensemble and the Multi-Cultural Performing Group, and is founder of Black Kids in Theater. Her book, A Lunch Line: Contemporary Scenes For Contemporary Teens was published in 1988. Her new play, Sunday Dinner, will be published this year. A native New Yorker who has lived and worked in Nigeria, she earned her B.A. in Theater from Bennington College and her M.F.A. in Theater from New York University. She is director of OPPORTUNITY SKYWAY Theater, a new program which trains teachers to use drama to teach, and engages teachers and students in workshops emphasizing aviation history.

HANNAH OLANOFF has been the Audience Development Director at Ford's Theater for the past three years. She is responsible for outreach to the Washington Metropolitan Community, coordinating services for the visually and hearing impaired, and educational opportunities for young people. Ms. Olanoff has supervised Opening Act Workshops and the companion study guides for each production. It was in the first season of this program that the OPPORTUNITY SKYWAY students attended the play, Black Eagles. The rest of the theater-as-teaching-tool story is history in the making.

SHELLY SNYDER is Communications and Aviation Education Manager for the General Aviation Manufacturers Association. She serves as national secretary of the University Aviation Association and is GAMA's representative at the Airway Science Industry Roundtable. She was elected vice chair of the new National Coalition for Aviation Education. An active pilot and member of the Congressional Flying Club, she has a B.A. in Commercial Aviation from Delta State, and a Public Relations degree from George Washington University.

MERVIN K. STRICKLER, JR., Ed.D., is recognized as the "dean" of aviation education across the United States and throughout the world. He serves as a consultant to the National Air Transportation Association, and as Director of Aviation and Space Education for the National Aeronautic Association. He designed and taught an experimental high school aviation program before World War II, and, during that war, organized and headed the U.S. Army Air Corps College of Aeronautics in Nevada. He earned his doctorate in education from Stanford University in 1951 and embarked on a distinguished career of speaking, writing and consulting. He has served as a consultant to many aviation associations and the federal government, and received the esteemed Frank G. Brewer Trophy from the President of the United States in 1952 for his exceptional service to the nation. In 1987 he received the FAA's Award for Distinguished Service. Dr. Strickler is the author of hundreds of articles and papers, including the FAA Aviation Magnet School Curriculum Guides, which will be published this year.

LAWRENCE L. BURIAN has been president of the National Air Transportation Association for 17 years. NATA, chartered in 1940, represents the business interests of aviation service companies. Under Mr. Burian's leadership, NATA has grown ten-fold to represent 2,000 locations. Mr. Burian began flying in 1959 and once managed a fixed base operation where he taught flying, pumped gas, and repaired general service aircraft. He learned flying from the ground up. A veteran Air Force pilot in the Korean War, he later taught college-level aviation courses. He has served on many commissions and studies, and is either a member of the board or a consultant to dozens of aviation and business groups in the U.S. and abroad.

PHILLIP S. WOODRUFF has been a leader in aviation education for more than 20 years and has traveled the world on missions related to aviation and space development. He is Manager of Aviation Education, Federal Aviation Administration, and former Director of Aerospace Education for the Great Lakes Region of the Civil Air Patrol, U.S. Air Force. Previously he held management positions with Cessna Aircraft and American Telephone & Telegraph. He is an honors graduate of Embry-Riddle Aeronautical University, and a flight instructor with more than 3,000 hours who has provided first flights for hundreds of students and teachers.

TYSON W. WHITESIDE, Esq., is Director for Governmental and Industry Affairs for the Aircraft Electronics Association and Manager of the AEA's Educational Foundation. He was elected Chair of the National Coalition for Aviation Education. Previously he had served as advisor to the Secretary of the Interior, and staff assistant for the Senate Foreign Relations Committee. He is a graduate of the University of Kansas and George Washington University law school.

WARREN H. WHEELER is Chair, Virginia Aviation Board; President, WRA Services, Inc., and a veteran Captain with USAir. He was a pilot for former North Carolina Governor Terry Sanford when selected as the first african American pilot to fly with the former Piedmont Airlines. A native of Durham, North Carolina, Captain Wheeler soloed at age 16 and quickly earned his advanced ratings. He devotes time and energy to creating opportunities for minorities and women to prepare for a wide range of careers in aviation. He is a member of the board of directors for OPPORTUNITY SKYWAY.

JOHN GOGLIA is Permanent Secretary of the Flight Safety Committee, International Association of Machinists and Aerospace Workers, and the elected Treasurer of the National Coalition for Aviation Education. Employed by USAir, Mr. Goglia has served as lead mechanic, aircraft and maintenance inspector and developed training programs for mechanics. Previously he was owner and manager of a fixed base aviation services company.

JANETTE M. PRINCE manages the education program at the Aircraft Owners and Pilots Association and supervises AOPA's Fly a Teacher and APPLE programs (America's Pilots Participating in Local Education). A graduate of Embry-Riddle Aeronautical University, Ms. Prince is a student pilot, elected Secretary of the National Coalition for Aviation Education, and a member of the board of directors for OPPORTUNITY SKYWAY.

DAVID SWITZER, a retired Navy Commander and International FAA Official, is volunteer vice president for OPPORTUNITY SKYWAY in the Western States. He helped create and taught the first aviation program conducted in the Regional Occupational Program in Riverside, California. Commander Switzer began his career with the FAA in 1960 and for 10 years prior to his retirement in 1986 was FAA representative in Rome and the top U.S. official on civil aviation for an area covering 32 countries, from Italy through the Middle East and Bangladesh.

ARTHUR H. WHITE is President and CEO of the WSY Consulting Group and Chair, Jobs For The Future. He has directed more than 200 research and consulting assignments for corporations, associations, the news media, universities, and non-profit organizations. He serves on the Executive Committee of Reading Is Fundamental; as Vice Chair, Institute For Educational Leadership, and Chair, Connecticut's Housing Finance Authority. Since 1983 he has been directing a national analysis and development program regarding job opportunity training and retraining needs. Mr. White earned his A.B. and M.B.A. degrees at Harvard.

COMMENTS OF PARTICIPANTS

Invitees to the First Annual Aviation Education Forum at the National Press Club in Washington, D.C., were asked to comment on the reasons they wished to participate, as well as the stated objectives of the Forum. These are their responses:

"The future of our nation and our industry is in our hands. As a representative of more than 305,000 AOPA members, I am eager to offer the support and opinions of general aviation pilots to meeting this responsibility."

- Janette M. Prince, Public Relations Specialist Aircraft Owners & Pilots Assn., Frederick, MD.

"It is vital for America's future in the aviation workforce that we prepare today's students for tomorrow's opportunities. Time is running out. Aviation education is the key."

- Jack Schofield, M.Ed., Pilot and Aerospace Instructor

"I believe this could prove to be a wonderful opportunity for networking to form a broad support base."

- Barbara C. Loy, Consulting Teacher Memphis City Schools, Memphis, TN

"This forum offers a unique challenge and opportunity for individuals and organizations to find stimulating ways to motivate and inspire young people and adults to allow themselves to learn and be exposed to aviation education (in various forms) and the career opportunities available."

- Evie L. Washington, Opportunity Skyway, CAP Potomac Chapter 99s, EAA and Elegant Occa sions (Event Planners)

"As a board member of Opportunity Skyway, I maintain a strong concern and desire to assist our youth with career development in all areas."

- Dennis C. Brownlee, Director, Office of Central Services, Prince Georges Co.: Board member of Opportunity Skyway and the Prince Georges Co. Private Industry Council

"I served as chief flight/ground instructor for Opportunity Skyway and would like to offer my experiences/ recommendations."

- Lloyd J. Coleman, Chair Opportunity Skyway Advisory Committee

"Successful preparation of our learners to enter careers demands that we understand and merge future workforce needs into our programs. The forum provides us that opportunity."

- Katharine M. Oliver, Asst. State Superintendent, Career Technology and Adult Learning, Md. State Dept. of Education

"I am vitally interested in promoting, developing, and implementing programs in aviation that will provide educational and career awareness opportunities for our students."

- R. Ray Ogden, Director of Curriculum & Instruc tor, Prince George's Co. Public Schools

"This forum will focus our attention on the need to place aero-space education in our schools. I am especially interested in promoting flight instruction in high school for the development of pride, self-discipline and motivation."

- Richard L. Upchurch, Supervisor, Aviation Programs, Henrico Co. Public Schools, Richmond, VA.

"I wish to participate because of my involvement with youth and interest in aviation. I would like to get more youth exposed."

- David R. Smith, Opportunity Skyway, Bowie High School, Bowie, MD

"The Regional Occupational Program has begun an aviation occupations entry-level job training program. The process involved various agencies which produced an excellent curriculum."

- Jim Burruss, ROP Principle, Riverside Co. Office of Education, Indio, CA.

"I wish to participate because my background and interests have always been in aviation education, particularly black youth."

- Neal V. Loving, WPAFB (retired)

"We must today keep the youth off the streets and in the air in an all-year-round structured learning program. Aerospace learning teaches those values that are needed to keep America strong."

- Charles X. Suraci, Jr., Vice President, Aerospace Education, Air Force Assn.

"The forum combines my interests in aviation and in education and explores the future of both. As an educator, I would like to learn how I might use aviation to motivate young people to stay in school, seek

productive employment and thereby ensure the health of the American economy."

- *Dr. Helene Scher, Program Officer, Fund for the Improvement of Postsecondary Education, U.S. Dept. of Education*

"I wish to participate because I am interested in the impact of new technologies on job visioning in aviation."

- *Dr. Margaret C. Tradu, Washington Co. Board of Education, Hagerstown, MD.*

"I wish to participate because I'm an aviation instructor at Polytech High School and this information would be very helpful to both me and my students."

- *Harry J. Batty, Jr., Aviation Instructor, Woodside, DE.*

"Aviation career opportunities exist in many areas and steps need to be taken to expand contacts and information to teachers, counselors and students about those opportunities."

- *Frank G. Mitchell, Mgr. Sales Trng & Aviation Education, Beech Aircraft Corp.*

"I wish to participate because out of 38,254 current air carrier pilots, 2013 are minorities (5%), 512 Black (1.3%)."

- *Barry T. McCoy, Jr., NAI*

"I wish to participate because I am extremely interested in aviation education."

- *Roland T. Butler, Advisory Committee, Opportunity Skyway, Inc.*

"I wish to participate since I am a Black male working in the aviation industry, and I feel my comments and suggestions will be helpful."

- *Gary L. Hudson, Asst. Airport Manager College Park, MD.*

"I wish to participate because of my aviation experience, aviation education and interest, and ability to guide others' interest in aviation."

- *Elizabeth Matarese, FAA-certified Instrument Flight Instructor and Technical Program Ana lyst, Flight Safety Div., Federal Aviation Admini stration National Headquarters*

"I wish to participate because I want to meet others that have also been working in aviation education."

- *Scott A. Ladsman, Captain, USAF VP for Aero space Education for College Park Airport and Operation Skyway Presenter at local schools.*

"I wish to participate because of my desire to share the commitment to this vital education mission."

- *Dr. Paul Flagg, PhD, USAF and Director of Aero· space Education, Middle East Region*

"I think the mission of Opportunity Skyway is incredibly important in raising interest levels for aviation careers among the youth of our nation. We must ensure that the pipeline which provides qualified and interested people for the aviation industry and aerospace infrastructure remains full of quality people. I feel that Opportunity Skyway is an excellent vehicle to generate that interest and to coordinate aviation career opportunities. It presents a great place to start an aviation career."

- *Charles Botula III, Col, USAF Commander*

"Young people need to know that aviation is full of opportunities for them--especially women."

- *Ellen Crum, FAA Air Traffic Rules Branch*

"With the down-sizing of the military, it becomes increasingly important for civilian aviation to attract and train high-quality young people."

- *J. Craig Ray, Col. USAF (ret.) Air Force Assn. Veterans/Retirees Council*

"The greatest resource our country has is the potential of future leadership within our children."

- *Lt. Col. Carroll Huneycutt, VIP Pilot - USAF*

"I am interested in promoting aviation education with our nation's young people."

- *Norm Mowbray, President Aviation Education Partnership*

"I feel strongly that America needs the full participation of all citizens to effectively enter the 2000's. Moreover, I am firmly committed to improving opportunities for minorities in aviation."

- *Charles L. Liddell, President, Lake Charles Chapter, Tuskegee Airmen*

"I want to influence what is to come in the regime of education and career development for our students."

- *Bruce F. Mundie, Director, Office of Regional Aviation, Maryland Aviation Admin.*

"I wish to participate because I am interested in the following: a) increasing minority participation in aviation and aerospace careers; b) developing and initiating aviation programs in high schools."

- *David Fogleman, Aerospace Coordinator, Southern University, Shreveport, LA*

"I wish to participate because I am operating the College Park Opportunity Summer Camp this summer."

- *Dr. William P. Brose, Upper Marlboro, MD*

"I am a dedicated educator who is always looking to expose and advance the area of science for urban youth. Aviation is an area that minority young people almost never consider when choosing a career, only

because of limited exposure."

- Ida Barner, Science Site Coordinator, D.C. Public Schools, Washington, DC

"If we don't plan for the future, our work today is futile."

- Edward E. Moon, Opportunity Skyway & OBAP

"NASAO Center for Aviation Research and Education (NASAO/CARE) exists to serve the developmental needs of the nation and the states in the areas of aviation research and education."

- Chase C. Stockton, Director, NASAO/CARE

"We teach an advanced science and technology class. Projects include remote control blimps, world's largest paper airplane, 7' hovercraft."

- R. J. Lenda, Dept. Chairman, R. Evans, Science, Montgomery Co. Public Schools, MD

"I am particularly pleased to hear that the under-representation of women and people of color in the aviation industry will be addressed during the forum. I have taken a personal interest in this issue because I believe that aviation needs the skills and talents this group can bring to our industry."

- Hank Verbais, Aviation Education Officer, FAA

"Like many others, I believe that our nation's aviation industry has reached a critical turning point. We must act quickly and decisively if we are to maintain our position as the world's preeminent aviation authority. Aviation education and career development can play a key role in the industry's resurgence. We must look critically at the nature and delivery of school curricula and develop an educational strategy which utilizes a thematic, interdisciplinary approach that is more responsive to the needs of business. We must foster an interest in aviation and introduce students to aviation careers at an earlier age. We must provide a defined educational/career path from the elementary to the post secondary level. Finally, we must fully include those segments of our population which have so much to offer but have limited opportunities to contribute."

- Hank Verbais, Aviation Education Officer, FAA

"Some students require a reason for learning. Often these students have difficulty attaining minimum standards and/or become drop-outs. Interest in aviation can be a passionate reason for learning all types of subjects. Introducing these at-risk students to aviation can give some of them the necessary motive to learn. It will not motivate all at-risk students.

Only some of the affected students will want, or be able, to become pilots. Some of the students motivated by an interest in aviation will not continue their interest beyond school. However, with the great variety of possible occupations in aerospace, all students who do retain their interest in aviation can find some employment in the industry if they get the necessary background and training. For some fields, this background must start early.

The future of aviation in the United States, as well as the nation's economic future as a whole, requires that we identify at-risk students, find something that interests each of them, and use those tools to help all of them reach their full potential. Aviation is, and should be, one of those tools."

- Pat Fletcher, Aviation Analyst, MiTech, Inc., Member, Opportunity Skyway Advisory Committee

"I wish to participate because I like to design and build Baide controlled aircraft. I have a limited knowledge of how an aircraft performs but I do know how an airfoil works and what lift and drag coefficients are and some other stuff. I have already built some RC planes and I am now working on a research RC plane with a 6 1/2' wing span that is capable of carrying at the most 50 pounds."

- Timmy Knight, Hollywood, MD. 18 years old